

FLEMING- SEAHORSE COASTAL CONSULTING
DHS Coastal Resilience Center
Year 6 ADCIRC Project Workplan
[July 1, 2020 – June 30, 2021]

1. **Title.** Sustainable Real Time Model Guidance
2. **Principal Investigator.** Jason Fleming, Seahorse Coastal Consulting, LLC
3. **Other Participants/Partners.**
 - Within CRC: Carola Kaiser, LSU; Austin Becker and Isaac Ginis, URI; Brian Blanton and Rick Luettich, UNC; Clint Dawson, UT; Casey Dietrich, NCSU; Tom Richardson, CRC.
 - External to CRC: Brett Estrade, Coastal Computing Services, LLC; Nate Dill, Ransom Consulting, Inc

4. **Short Description.**

We are at a crossroads after multiple years of investment into the event-based forecasting capability of the ADCIRC Prediction System (APS). The time has come to convert our DHS-supported momentum into long term sustainable funding. This Workplan supports the 2020 operation of the APS but makes a substantial investment in developing the business processes for acquiring and retaining renewable funding from diverse stakeholders for the APS.

5. **Abstract.**

There are four components in this Workplan: (a) operations; (b) minimum viable product (MVP) development; (c) financial infrastructure; and (d) voice of customer.

(a) Our operations have focused mostly on tropical cyclone events in the past, and our service levels have consisted of self-imposed deadlines and metrics with results produced on a “best effort” basis. With increasing attention to our guidance at the highest levels in the US, we are under pressure to develop our research operation of the ADCIRC Prediction System (APS) into a commercial grade service operating 24/7/365. This level of performance requires a more rigorous approach to hardware, APS software (ADCIRC, ASGS, and CERA in particular), and personnel management.

(b) Startup companies have coined the phrase “minimum viable product” (MVP) to emphasize a lean approach to initial product design that produces revenue and generates customer feedback while preventing misplaced investment in unnecessary features. We will be designing, building, testing, and beginning to sell our MVP in Year 6.

(c) With DHS S&T funding for the CRC, we have used the financial infrastructure of DHS and UNC Chapel Hill (contracting, accounting, payment processing, etc) to support our activities. However, we seek a new financial model that can handle a diversified set of stakeholders and that can operate in parallel with the existing DHS/UNC financial conduit. This activity includes setting up everything needed to accept money from stakeholders and feed that money back to organizations helping to produce the MVP and otherwise

participating in our real time model guidance.

(d) When developing and delivering new products and services, it is critically important to seek out the voice of the customer and listen carefully to it. This includes everything from focus groups to technical support to structured user experience testing and training. Our previous Year 6 proposal focused on extensive travel, but with COVID-19, this is no longer sensible. As a result, budget that was previously allocated to travel and in-person events will be reallocated to all-digital outreach and engagement with professional quality graphic design, video editing, video hosting, online training, and other distance learning and coaching technologies.